

**Katten Muchin Rosenman LLP**

575 Madison Avenue
New York, NY 10022-2585
212.940.8800 tel
212.940.8776 fax

Facsimile

To	Company	Fax Number	Phone Number
1. Commissioner for Patents	United States Patent and Trademark Office	(571) 273-2885	

Date	Client/Matter Number
December/3, 2006	310010-00105
From	Attorney Number
James J. Dade	03290
Phone	Fax
212.940.6731	(212) 940-8986

Total number of pages, including cover letter: 3

If you do not receive all of the pages, please call: 212.940.8800

Comments:

U.S. Patent Application No.: 10/500,783

INTEGRAL PULSE TUBE REFRIGERATOR AND CRYOPUMP

Our Reference No.: SHI 19.277 (310010-00105)

FEE(S) TRANSMITTAL

For Messenger Department Use Only

Your fax has been sent. Attached is your original.

Date _____ Time _____

Signature _____

Important

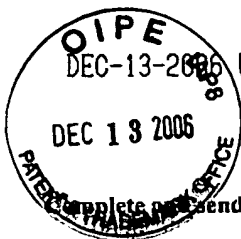
This facsimile transmission contains information intended for the exclusive use of the individual or entity to whom it is addressed and may contain information that is proprietary, privileged, confidential and/or exempt from disclosure under applicable law.

If you are not the intended recipient (or an employee or agent responsible for delivering this facsimile transmission to the intended recipient), you are hereby notified that any copying, disclosure or distribution of this information may be subject to legal restriction or sanction. Please notify the sender by telephone to arrange for the return or destruction of the information and all copies.

NEW YORK CHARLOTTE CHICAGO IRVING LONDON LOS ANGELES PALO ALTO WASHINGTON, DC WWW.KATTENLAW.COM

LONDON AFFILIATE: KATTEN MUCHIN ROSENMAN CORNISH LLP

A limited liability partnership including professional corporations



12/13/2006 HDEHES2 00000053 501290 10500783
OP FC:1504 1400.00 DA
03 FC:8001 300.00 DA
FAX NO. 12129408987 30.00 DA
P. 02

PART B - FEE(S) TRANSMITTAL

Send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FREE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

026304 7590 09/15/2006

KATTEN MUCHIN ROSENMAN LLP
575 MADISON AVENUE
NEW YORK, NY 10022-2585

Customer Number: 026304

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (371) 273-2885, on the date indicated below.

James I. Dade (Depositor's name)
(Signature)
December 13, 2006 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,783	07/02/2004	Ralph C Longworth	SHI 19.277 (310010-00105)	8488

TITLE OF INVENTION: INTEGRAL PULSE TUBE REFRIGERATOR AND CRYOPUMP

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	12/15/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
DOERRLER, WILLIAM CHARLES	3744	062-055500

1. Change of correspondence address or indication of "Free Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Free Address" indication (or "Free Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Katten Muchin
2 Rosenman LLP
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

SHI-APD Cryogenics, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Allentown, P.A.

01 FC:1501 1400.00 DA
02 FC:1504 300.00 DA
03 FC:8001 30.00 DA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☒ Advance Order - # of Copies 10

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 501290 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Martha M. Rumore

Date 12/13/06

Typed or printed name Martha M. Rumore

Registration No. 47,046

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.